

1030-13-57

Christopher A Francisco* (chris@math.okstate.edu), Department of Mathematics,
Oklahoma State University, 401 Mathematical Sciences, Stillwater, OK 74078. *Tetrahedral curves
via graphs and Alexander duality.*

A tetrahedral curve is a (usually nonreduced) curve in \mathbb{P}^3 defined by an unmixed, height two ideal generated by monomials. We give an explicit characterization of when these curves are arithmetically Cohen-Macaulay by associating a graph to each curve and, using results from combinatorial commutative algebra and Alexander duality, relating the structure of the complementary graph to the Cohen-Macaulay property. (Received July 09, 2007)